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SAVING COSTS

JSPL to test new steel-making process at its Angul plant

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Jindal Steel and Power Ltd (JSPL) plans to install HIsmelt technology, a new steel-making process developed by the Rio Tinto Group, at its Angul plant for the first time, in what analysts say is a test case for the commercial use of the cost-saving technology.

Last month, JSPL said it had formed a joint venture with Australian miner **Rio Tinto Ltd** to buy their pilot plant using HIsmelt in western Australia and also to sell it to other steel makers and share royalties.

HIsmelt, short for high-intensity smelting, makes steel by directly using iron ore fines and non-coking coals, both of which are available in plenty in India. In addition, it cuts capital costs as the plant does not need a coke oven battery and a sinter plant to process coal and iron ore.

"The plant's dismantling will start (in Australia) in six months. It will come to India in one shipload," said V.R. Sharma, deputy managing director and chief executive officer (steel business) at JSPL, told *Mint*. "The moment it starts production at Angul, it will be replicated at all our projects."

Sharma said the 800,000 tonne plant was expected to be functional at Angul by the end of 2013, and thereafter by 2016, JSPL's other projects in Chhattisgarh and Jharkhand are expected to adopt the new technology.

The Angul plant will subsequently be upgraded to 1 million tonnes (mt) capacity, Sharma said.

"Rio Tinto has been working on this technology for the past 30 years. This iron-making plant was built in Kwinana in western Australia, where the plant worked at 80-90% capacity," said Nik Senapati, managing director of Rio Tinto India. "Since it was a pilot plant, its ancillary facilities worked on (a) stand-alone basis and the plant is on care and maintenance now."

Senapati said Rio Tinto did not find it feasible to make steel in Kwinana as the plant was situated far from the markets. Besides, its purpose was to prove the technology. High costs in Australia were another deterrent.

Both Sharma and Senapati said several steel companies had evinced interest in buying the technology and would be closely following its progress at Angul.

Analysts say JSPL had made a bold move and if it met the challenge of installing the technology, it would be a breakthrough.

"If JSPL is able to successfully implement HIsmelt here, it may open a new market for this technology as other steel manufacturers could adopt this technology for their new projects in India," said Ashish Upadhyay, an associate director of Fitch Ratings. "However, there is not much of historical track record for this technology, so the risk would be on how well and how fast they are able to implement it." But for an industry that has no indigenous, modern steel technology and desperately needs it as the business environment is changing, testing a new foreign technology is a laudable step, another analyst said.

> Firm to install HIsmelt technology, a new steel-making process developed by Rio Tinto

"It is a very welcome step. JSPL is in a leadership role," said Manish Pande, regional director at CRU Strategies, an international mining and metals consultancy. "Indian companies have been very reluctant in trying out new technology. And they have been lagging behind in developing it, too, as they haven't had much motivation for it."

Pande said that since HIsmelt has not been commercially used elsewhere, it could take time to stabilize once JSPL gets started on it. It could also not be used for very large expansions.

Another analyst said on condition of anonymity that JSPL would leverage the HIsmelt technology to be more profitable.

"JSPL, anyway, is better placed, if you look at their profitability and their backward linkages and captive power plant," said the analyst. "They are better placed to test this technology and will take advantage of it."

JSPL's net profit, excluding units, from steel, pellets and captive power rose 39% to ₹2,064.12 crore in 2010-11 from a year earlier. JSPL, the nation's fifth largest steel producer, makes just 3 mt of steel in an industry that makes 78 mt of the alloy. The company has been quick to expand overseas for growth, the biggest race currently in the metal and resources sector.

Its unit Jindal Steel Bolivia secured the development rights of 20 billion tonnes of iron ore of the El Mutun mines in 2007 in South America. Another unit, Jindal Shadeed, acquired a 1.5 mt per year plant at Sohar in Oman at a cost of $500 million in 2010. Both units are now producing. At present, old steel plants in India use the blast furnace route to make steel that needs iron ore lumps, which are available but expensive, and coking coal, also expensive as most of it is imported. Some of the modern plants have been built with newer technology, such as JSW Steel Ltd's Corex technology at its Vijaynagar plant in Karnataka that also uses iron ore fines and non-coking coal. Essar Steel has a gas-based, hot-briquetted iron plant in Hazira.

Steel Authority of India Ltd (SAIL) is seeking Finex technology from South Korea's Posco, though talks are long delayed and unconfirmed media reports say Posco is unwilling to share Finex with SAIL unless given a majority stake.